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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,166	12/05/2003	Jean Dominique Turgis	C-504 CIP	2931
32172	7590	08/09/2007		
DICKSTEIN SHAPIRO LLP 1177 AVENUE OF THE AMERICAS (6TH AVENUE) NEW YORK, NY 10036-2714				
			EXAMINER SHOSHO, CALLIE E	
			ART UNIT 1714	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/730,166

Applicant(s)

TURGIS ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/21/06</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. All outstanding rejections except for those described below are overcome by applicant's amendment filed 12/27/06.

**Claim Rejections - 35 USC § 103**

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laksin et al. (U.S. 2003/0154871) in view of Tanaka et al. (U.S. 5,587,405).

The rejection is adequately set forth in paragraph 5 of the office action mailed 3/31/06 and is incorporated here by reference.

It is further noted that Laksin et al. disclose that the ink comprises single phase solution (paragraphs 31-32 and claim 18).

4. Claims 6-8 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gummeson (U.S. 2002/0198289) in view of Tanaka et al. (U.S. 5,587,405).

The rejection is adequately set forth in paragraph 6 of the office action mailed 3/31/06 and is incorporated here by reference.

It is further noted that Gummeson et al. disclose that the ink comprises solution (paragraph 27). Although there is no explicit disclosure that the ink is a single phase ink, given

that Gummeson et al. disclose ink identical to that presently claimed, it is clear that the ink is inherently single phase as presently claimed.

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/19369 in view of Thanawalla et al. (U.S. 4,745,138) and Tanaka et al. (U.S. 5,587,405).

The rejection is adequately set forth in paragraph 7 of the office action mailed 3/31/06 and is incorporated here by reference.

It is further noted that WO 99/19369 discloses that the ink comprises solution (page 3, fourth full paragraph). Although there is no explicit disclosure that the ink is a single phase ink, given that WO 99/19369 disclose ink identical to that presently claimed, it is clear that the ink is inherently single phase as presently claimed.

#### **Response to Arguments**

6. Applicants' arguments regarding Noguchi et al. (U.S. 6,790,875) and Phillips et al. (*Radiation Curable Water Dilutable Polyester Acrylates*) have been considered but they are moot in view of the discontinuation of the use of these references against the present claims.

7. Applicants' arguments filed 12/27/06 have been fully considered but, with the exception of arguments relating to Noguchi et al. and Phillips et al., they are not persuasive.

Applicants argue that Laksin et al. is not a relevant reference against the present claims given that there is no disclosure in Laksin et al. of water-soluble ethylenically unsaturated resin that is surface active material as required in all the present claims.

However, attention is drawn to, for instance, paragraph 73 of Laksin et al. that discloses the use of water-soluble ethylenically unsaturated resin known under the tradename resin 924-1069 and which is further described in WO 99/19369. It is noted that this is identical to the water-soluble resin utilized in the present invention (see page 13, lines 15-17 and examples in the present specification). Although there is no explicit disclosure that the resin is a surface active material chemically incorporating hydrophilic and hydrophobic structures as presently claimed, given that Laksin et al. disclose resin identical to that utilized in the present invention, it is clear that such resin is intrinsically a surface active material chemically incorporating hydrophilic and hydrophobic structures as presently claimed.

Thus, it is the examiner's position that Laksin et al. do disclose water-soluble resin as required in all the present claims.

Applicants argue that Gummeson et al. is not a relevant reference against the present claims given that there is no disclosure in Gummeson et al. of water-soluble ethylenically unsaturated resin that is surface active material as required in all the present claims.

However, it is noted that paragraph 27 of Gummeson et al. discloses that the UV curable resin dissolves in aqueous carrier, i.e. resin is water-soluble, while paragraphs 32-34 disclose that the resin includes urethane resins possessing carboxyl groups that are neutralized. Thus, it is clear that the water-soluble resin comprises both hydrophobic portion, i.e. urethane, and hydrophilic portion, i.e. carboxyl groups.

Thus, given that Gummeson et al. disclose water-soluble resin with neutralized acid groups that possesses hydrophobic portion and hydrophilic portion, it is the examiner's position that Gummeson et al. do disclose water-soluble resin as required in all the present claims.

Applicants argue that WO 99/19369 is not a relevant reference against the present claims given that there is no disclosure in WO 99/19369 of water-soluble ethylenically unsaturated resin that is surface active material as required in all the present claims.

However, attention is drawn to page 6, second full paragraph of WO 99/19369 that discloses water-soluble resin that is prepared by reacting styrene/maleic anhydride copolymer with hydroxyl-terminated acrylate and monofunctional alcohol followed by neutralizing with ammonia. This water-soluble resin is identical to that utilized in the present invention. It is significant to note that the present specification explicitly refers to the water-soluble resin of WO 99/19369. Although there is no explicit disclosure in WO 99/19369 that the resin is a surface active material chemically incorporating hydrophilic and hydrophobic structures as presently claimed, given that WO 99/19369 disclose resin identical to that utilized in the present invention, it is clear that such resin is intrinsically a surface active material chemically incorporating hydrophilic and hydrophobic structures as presently claimed.

Applicants also argue that there is no motivation to combine Laksin et al. or Gummeson et al. with Tanaka et al. given that there is no disclosure in Tanaka et al. that metallic pigments are equivalent and interchangeable with non-metallic pigments or that metallic pigments can be used in all energy curable compositions.

It is noted that Laksin et al. and Gummeson et al. each disclose ink utilizing pigment, however, there is no disclosure in either reference of metallic pigment.

Tanaka et al., which is drawn to radiation curable ink as is Laksin et al. and Gummeson et al., disclose that such inks utilize both carbon black, as disclosed by Laksin et al. or Gummeson et al., as well as metallic pigments and that it is desirable to select pigment with fast color having strong light resistance in compliance with radiation curable methods. Thus, it is the examiner position that Tanaka et al. do disclose the equivalence and interchangeability of using carbon black with using metallic pigments in radiation curable inks. Although there is no disclosure that such pigments are suitable for use in all radiation curable inks, based on the teaching of Tanaka et al., one of ordinary skill in the art would have recognized that metallic pigments are suitable for use in radiation curable inks and would have expected such metallic pigments to also effectively function in other radiation curable inks including those disclosed by Laksin et al. or Gummeson et al.

Thus, given that Tanaka et al. is drawn to radiation curable ink as is Laksin et al. and Gummeson et al., given that Tanaka et al. disclose the equivalence and interchangeability of using carbon black, as disclosed by Laksin et al. or Gummeson et al., with using metallic pigment as presently claimed and given that Tanaka et al. disclose motivation for using such metallic pigment, it therefore would have been obvious to one of ordinary skill in the art to utilize metallic pigment as the pigment in the ink of Laksin et al. or Gummeson et al., and thereby arrive at the claimed invention.

Applicants argue that just because Tanaka et al. disclose list of pigments this does not mean that they are equivalent and interchangeable and cite *In re Grasselli*, 218 USPQ 769 (Fed. Cir. 1983) as evidence to support their position.

However, the present situation is different than that of *Grasselli* where the court held that evidence of superior properties for sodium containing composition is insufficient to establish non-obviousness of broad claims for a catalyst with “an alkali metal” where it is well known in the catalyst art that different alkali metals are not interchangeable and applicants had shown unexpected results only for sodium containing metals. In the present situation, the question is not one of unexpected results and further applicants have not provided evidence that carbon black and metallic pigments are well known not to be equivalent and interchangeable in radiation curable inks. Given that Laksin et al. or Gummeson et al. disclose ink comprising carbon black and given that Tanaka et al. disclose the equivalence and interchangeability of using metallic pigment with using carbon black in radiation curable inks, it therefore would have been obvious to one of ordinary skill in the art to utilize metallic pigment in ink of either Laksin et al. or Gummeson et al.

Similarly, applicants argue that there is no motivation to combine WO 99/19369 with Tanaka et al. given that there is no disclosure in Tanaka et al. that metallic pigments are equivalent and interchangeable with non-metallic pigments or that metallic pigments can be used in all energy curable composition.

It is noted that WO 99/19369 discloses ink utilizing pigment, however, there is no disclosure in WO 99/19369 of metallic pigment.



Tanaka et al., which is drawn to radiation curable ink as is WO 99/19369, disclose that such inks utilize both organic pigments, as disclosed WO 99/19369, as well as metallic pigments and that it is desirable to select pigment with fast color having strong light resistance in compliance with radiation curable methods. Thus, it is the examiner position that Tanaka et al. do disclose the equivalence and interchangeability of using organic pigment with using metallic pigments in radiation curable inks. Although there is no disclosure that such pigments are suitable for use in all radiation curable inks, based on the teaching of Tanaka et al., one of ordinary skill in the art would have recognized that metallic pigments are suitable for use in radiation curable inks and would have expected such metallic pigments to also effectively function in other radiation curable inks including that disclosed by WO 99/19369.

Thus, given that Tanaka et al. is drawn to radiation curable ink as is WO 99/19369, given that Tanaka et al. disclose the equivalence and interchangeability of using organic pigment, as disclosed by WO 99/19369, with using metallic pigment as presently claimed and given that Tanaka et al. disclose motivation for using such pigments, it therefore would have been obvious to one of ordinary skill in the art to utilize metallic pigment as the pigment in the ink of WO 99/19369, and thereby arrive at the claimed invention.

### **Conclusion**


8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
8/5/07